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November 30, 2017

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

**Re: Duke Energy Progress, LLC – Monthly Power Plant Performance Report
Docket No. 2006-224-E**

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of October 2017.

Should you have any questions regarding this matter, please do not hesitate to contact me at 803.988.7130.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Shannon Bowyer Hudson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Stone, Mattheis, Xenopoulos & Brew, PC
Mr. Gary Walsh, Walsh Consulting, LLC

Duke Energy Progress
Base Load Power Plant Performance Review Plan

Period: October, 2017

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	None					
	2	None					
Harris	1	10/22/2017 - 10/24/2017	52.32	Unscheduled	Repair lifted moisture separator reheater safety relief valve	Moisture separator reheater failed relief valve	Moisture separator reheater valve replaced
Robinson	2	None					

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2017**

Lee Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1A	10/7/2017 1:39:00 AM To 10/13/2017 7:44:00 PM	Sch	5272	Gas Turbine - Boroscope Inspection	Borescope inspection and HRSG inspection	
1B	9/30/2017 12:54:00 AM To 10/6/2017 1:52:00 PM	Sch	5272	Gas Turbine - Boroscope Inspection	Borescope Inspection and HRSG Inspection	

Notes:

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress Base Load Power Plant Performance Review Plan October 2017

Richmond County Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
8	10/4/2017 11:38:00 AM To 10/4/2017 8:00:00 PM	Unsch	5245	Gas Turbine Control System - Data Highway	UPS system power failure	
8	10/4/2017 9:58:00 PM To 10/4/2017 10:05:00 PM	Unsch	0561	Other Cold Reheat Steam Valves	CRH balancing valve closed	
8	10/4/2017 10:46:00 PM To 10/4/2017 10:54:00 PM	Unsch	0561	Other Cold Reheat Steam Valves	CRH balancing valve closed	
8	10/4/2017 11:45:00 PM To 10/4/2017 11:55:00 PM	Unsch	0561	Other Cold Reheat Steam Valves	CRH balancing valve closed	
ST4	10/4/2017 10:41:00 AM To 10/4/2017 2:57:00 PM	Unsch	1999	Boiler; Miscellaneous	U8 IP drum high/high level	
9	10/7/2017 6:51:00 AM To 10/20/2017 1:00:00 PM	Sch	3113	Condenser Tube and Water Box Cleaning	BOP outage	
9	10/20/2017 1:28:00 PM To 10/20/2017 1:59:00 PM	Unsch	5049	Other Gas Turbine Fuel System Problems	High blade path trip after outage	
9	10/20/2017 2:06:00 PM To 10/20/2017 5:45:00 PM	Unsch	5075	Blade Path Temperature Spread	High blade path trip after outage	
9	10/20/2017 5:59:00 PM To 10/21/2017 2:30:00 AM	Unsch	5075	Blade Path Temperature Spread	U9 Replaced witch hat strainers	
9	10/21/2017 2:54:00 AM To 10/22/2017 8:22:00 PM	Unsch	5075	Blade Path Temperature Spread	U9 can 14 hardware replacement, cracks discovered	
9	10/29/2017 12:04:00 AM To 10/29/2017 4:40:00 AM	Sch	5299	Other Gas Turbine Problems	RAC gasket leak/replacement	
10	10/7/2017 6:39:00 AM To 10/20/2017 1:59:00 PM	Sch	3113	Condenser Tube and Water Box Cleaning	BOP outage	
ST5	10/7/2017 5:21:00 AM To 10/20/2017 10:29:00 PM	Sch	3113	Condenser Tube and Water Box Cleaning	BOP outage	

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Duke Energy Progress Base Load Power Plant Performance Review Plan October 2017

Sutton Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
1A	10/24/2017 8:28:00 AM To 10/28/2017 9:42:00 PM	Sch	5274 General Gas Turbine Unit Inspection	Fall Outage	
1A	10/28/2017 10:13:00 PM To 10/28/2017 10:18:00 PM	Unsch	3430 Feedwater Regulating (Boiler Level Control) Valve	Drum level regulator will not control	
1A	10/28/2017 10:27:00 PM To 10/28/2017 10:32:00 PM	Unsch	3430 Feedwater Regulating (Boiler Level Control) Valve	Drum level regulator will not control	
1B	10/21/2017 1:39:00 AM To 10/25/2017 3:53:00 PM	Sch	5274 General Gas Turbine Unit Inspection	Fall Outage	
1B	10/25/2017 4:40:00 PM To 10/29/2017 12:20:00 PM	Unsch	5075 Blade Path Temperature Spread	CT Tripped on Blade Path Spread	
1B	10/29/2017 12:54:00 PM To 10/31/2017 4:03:00 PM	Unsch	5075 Blade Path Temperature Spread	GT Auto Unload/Trip to Full Speed No Load, GT normal shutdown	
ST1	10/23/2017 11:37:00 PM To 10/25/2017 4:40:00 PM	Sch	3612 Switchyard System Protection Devices	Out of Management Control - Transmission Relay NERC PM's	
ST1	10/25/2017 4:40:00 PM To 10/29/2017 1:53:00 AM	Sch	5075 Blade Path Temperature Spread	01B CT tripped due to blade path spread. 01A CT in outage. STG was on turning gear	

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Duke Energy Progress
Base Load Power Plant Performance Review Plan

October 2017
Brunswick Nuclear Station

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	744	744		
(C) Net Gen (mWh) and Capacity Factor (%)	705,199	101.05	689,843	99.49
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	2,477	0.35	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-9,804	-1.40	3,565	0.51
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	697,872	100.00%	693,408	100.00%
(K) Equivalent Availability (%)		99.55		100.00
(L) Output Factor (%)		101.05		99.49
(M) Heat Rate (BTU/NkWh)		10,410		10,735

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

**October 2017
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	928	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	556,960	80.67
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	90,693	13.14
(F) Net mWh Not Gen due to Full Forced Outages	48,550	7.03
* (G) Net mWh Not Gen due to Partial Forced Outages	-5,771	-0.84
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	690,432	100.00%
(K) Equivalent Availability (%)		78.95
(L) Output Factor (%)		86.77
(M) Heat Rate (BTU/NkWh)		10,904

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

**October 2017
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	569,005	103.21
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-17,701	-3.21
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	551,304	100.00%
(K) Equivalent Availability (%)		100.00
(L) Output Factor (%)		103.21
(M) Heat Rate (BTU/NkWh)		10,419

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2017**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	223	222	223	379	1,047
(B) Period Hrs	744	744	744	744	744
(C) Net Generation (mWh)	104,028	110,057	136,277	230,734	581,096
(D) Capacity Factor (%)	62.70	66.63	82.14	81.83	74.60
(E) Net mWh Not Generated due to Full Scheduled Outages	36,145	29,718	0	0	65,863
(F) Scheduled Outages: percent of Period Hrs	21.79	17.99	0.00	0.00	8.46
(G) Net mWh Not Generated due to Partial Scheduled Outages	15,421	15,863	19,716	35,742	86,743
(H) Scheduled Derates: percent of Period Hrs	9.29	9.60	11.88	12.68	11.14
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	10,319	9,529	9,919	15,500	45,266
(N) Economic Dispatch: percent of Period Hrs	6.22	5.77	5.98	5.50	5.81
(O) Net mWh Possible in Period	165,912	165,168	165,912	281,976	778,968
(P) Equivalent Availability (%)	68.92	72.40	88.12	87.32	80.41
(Q) Output Factor (%)	80.16	81.25	82.14	81.83	81.49
(R) Heat Rate (BTU/NkWh)	8,904	9,020	8,727	4,835	7,269

Notes:

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- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2017**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	189	189	175	553
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	112,909	111,282	128,434	352,625
(D) Capacity Factor (%)	80.30	79.14	98.64	85.71
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	13,020	13,234	2,219	28,473
(H) Scheduled Derates: percent of Period Hrs	9.26	9.41	1.70	6.92
(I) Net mWh Not Generated due to Full Forced Outages	0	1,660	747	2,407
(J) Forced Outages: percent of Period Hrs	0.00	1.18	0.57	0.58
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	14,687	14,440	0	29,127
(N) Economic Dispatch: percent of Period Hrs	10.44	10.27	0.00	7.08
(O) Net mWh Possible in Period	140,616	140,616	130,200	411,432
(P) Equivalent Availability (%)	90.74	89.41	97.72	92.49
(Q) Output Factor (%)	80.30	80.08	99.21	86.21
(R) Heat Rate (BTU/NkWh)	11,508	11,054	0	7,173

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- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2017**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	214	214	248	676
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	64,204	73,230	89,405	226,839
(D) Capacity Factor (%)	40.33	45.99	48.45	45.10
(E) Net mWh Not Generated due to Full Scheduled Outages	69,068	68,337	81,625	219,031
(F) Scheduled Outages: percent of Period Hrs	43.38	42.92	44.24	43.55
(G) Net mWh Not Generated due to Partial Scheduled Outages	7,342	8,281	415	16,038
(H) Scheduled Derates: percent of Period Hrs	4.61	5.20	0.22	3.19
(I) Net mWh Not Generated due to Full Forced Outages	11,588	0	0	11,588
(J) Forced Outages: percent of Period Hrs	7.28	0.00	0.00	2.30
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	7,013	9,368	13,067	29,448
(N) Economic Dispatch: percent of Period Hrs	4.40	5.88	7.08	5.86
(O) Net mWh Possible in Period	159,216	159,216	184,512	502,944
(P) Equivalent Availability (%)	44.73	51.88	55.54	50.96
(Q) Output Factor (%)	82.04	80.91	86.90	83.50
(R) Heat Rate (BTU/NkWh)	11,278	11,343	0	6,854

Notes:

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- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2017**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	225	225	267	717
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	111,267	86,941	126,374	324,582
(D) Capacity Factor (%)	66.47	51.94	63.62	60.85
(E) Net mWh Not Generated due to Full Scheduled Outages	24,577	24,802	32,645	82,025
(F) Scheduled Outages: percent of Period Hrs	14.68	14.82	16.43	15.38
(G) Net mWh Not Generated due to Partial Scheduled Outages	17,452	13,256	18,353	49,061
(H) Scheduled Derates: percent of Period Hrs	10.43	7.92	9.24	9.20
(I) Net mWh Not Generated due to Full Forced Outages	38	32,134	0	32,171
(J) Forced Outages: percent of Period Hrs	0.02	19.20	0.00	6.03
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	14,067	10,267	21,275	45,609
(N) Economic Dispatch: percent of Period Hrs	8.40	6.13	10.71	8.55
(O) Net mWh Possible in Period	167,400	167,400	198,648	533,448
(P) Equivalent Availability (%)	74.87	58.07	74.33	69.40
(Q) Output Factor (%)	78.74	78.71	76.13	77.69
(R) Heat Rate (BTU/NkWh)	11,642	11,605	0	7,099

Notes:

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- (R) Includes Light Off BTU's

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
October 2017**

Mayo Station

Unit 1

(A) MDC (mW)	746
(B) Period Hrs	744
(C) Net Generation (mWh)	40,466
(D) Net mWh Possible in Period	555,024
(E) Equivalent Availability (%)	53.76
(F) Output Factor (%)	39.10
(G) Capacity Factor (%)	7.29

Notes:

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**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
October 2017**

	Roxboro Station		
	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	744	744	744
(C) Net Generation (mWh)	85,809	121,774	124,465
(D) Net mWh Possible in Period	500,712	519,312	528,984
(E) Equivalent Availability (%)	42.01	49.98	35.50
(F) Output Factor (%)	67.75	63.35	65.50
(G) Capacity Factor (%)	17.14	23.45	23.53

Notes:

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

**November 2016 - October 2017
Brunswick Nuclear Station**

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	8760	8760		
(C) Net Gen (mWh) and Capacity Factor (%)	8,166,735	99.39	7,161,060	87.71
(D) Net mWh Not Gen due to Full Schedule Outages	70,647	0.86	691,653	8.47
* (E) Net mWh Not Gen due to Partial Scheduled Outages	56,204	0.68	215,105	2.63
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-76,706	-0.93	96,502	1.19
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,216,880	100.00%	8,164,320	100.00%
(K) Equivalent Availability (%)		97.76		90.28
(L) Output Factor (%)		100.25		95.83
(M) Heat Rate (BTU/NkWh)		10,424		10,824

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

**November 2016 - October 2017
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	928	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	7,931,370	97.57
(D) Net mWh Not Gen due to Full Schedule Outages	1,624	0.02
* (E) Net mWh Not Gen due to Partial Scheduled Outages	124,478	1.53
(F) Net mWh Not Gen due to Full Forced Outages	277,982	3.42
* (G) Net mWh Not Gen due to Partial Forced Outages	-206,174	-2.54
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,129,280	100.00%
(K) Equivalent Availability (%)		94.95
(L) Output Factor (%)		101.04
(M) Heat Rate (BTU/NkWh)		10,535

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

**November 2016 - October 2017
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	5,912,401	91.08
(D) Net mWh Not Gen due to Full Schedule Outages	746,940	11.51
* (E) Net mWh Not Gen due to Partial Scheduled Outages	-5,308	-0.08
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-162,873	-2.51
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	6,491,160	100.00%
(K) Equivalent Availability (%)		88.18
(L) Output Factor (%)		102.93
(M) Heat Rate (BTU/NkWh)		10,384

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	223	222	223	379	1,047
(B) Period Hrs	8,760	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,424,518	1,343,807	1,347,282	2,590,657	6,706,264
(D) Capacity Factor (%)	72.92	69.10	68.97	78.03	73.12
(E) Net mWh Not Generated due to Full Scheduled Outages	103,085	187,623	214,258	181,554	686,521
(F) Scheduled Outages: percent of Period Hrs	5.28	9.65	10.97	5.47	7.49
(G) Net mWh Not Generated due to Partial Scheduled Outages	244,992	236,371	238,612	165,818	885,792
(H) Scheduled Derates: percent of Period Hrs	12.54	12.15	12.21	4.99	9.66
(I) Net mWh Not Generated due to Full Forced Outages	6,099	0	9,935	111,698	127,731
(J) Forced Outages: percent of Period Hrs	0.31	0.00	0.51	3.36	1.39
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	9,862	9,862
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.30	0.11
(M) Net mWh Not Generated due to Economic Dispatch	174,786	176,919	143,393	260,452	755,550
(N) Economic Dispatch: percent of Period Hrs	8.95	9.10	7.34	7.84	8.24
(O) Net mWh Possible in Period	1,953,480	1,944,720	1,953,480	3,320,040	9,171,720
(P) Equivalent Availability (%)	81.87	78.20	76.31	85.88	81.36
(Q) Output Factor (%)	78.11	79.23	79.00	85.59	81.27
(R) Heat Rate (BTU/NkWh)	9,297	9,339	9,282	4,084	7,289

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**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	189	189	175	553
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,171,296	1,148,562	1,337,796	3,657,654
(D) Capacity Factor (%)	70.75	69.37	87.27	75.50
(E) Net mWh Not Generated due to Full Scheduled Outages	187,249	193,271	180,084	560,604
(F) Scheduled Outages: percent of Period Hrs	11.31	11.67	11.75	11.57
(G) Net mWh Not Generated due to Partial Scheduled Outages	161,013	163,395	28,840	353,248
(H) Scheduled Derates: percent of Period Hrs	9.73	9.87	1.88	7.29
(I) Net mWh Not Generated due to Full Forced Outages	419	10,338	747	11,504
(J) Forced Outages: percent of Period Hrs	0.03	0.62	0.05	0.24
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	4,941	4,941
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.32	0.10
(M) Net mWh Not Generated due to Economic Dispatch	135,664	140,074	0	256,330
(N) Economic Dispatch: percent of Period Hrs	8.19	8.46	0.00	5.29
(O) Net mWh Possible in Period	1,655,640	1,655,640	1,533,000	4,844,280
(P) Equivalent Availability (%)	78.94	77.83	86.00	80.80
(Q) Output Factor (%)	79.96	79.38	99.08	85.82
(R) Heat Rate (BTU/NkWh)	11,552	11,365	0	7,268

Notes:

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- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	214	214	248	676
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,396,505	1,426,866	1,891,053	4,714,424
(D) Capacity Factor (%)	74.49	76.11	87.16	79.65
(E) Net mWh Not Generated due to Full Scheduled Outages	169,327	155,400	169,508	494,235
(F) Scheduled Outages: percent of Period Hrs	9.03	8.29	7.81	8.35
(G) Net mWh Not Generated due to Partial Scheduled Outages	173,750	171,948	25,128	370,826
(H) Scheduled Derates: percent of Period Hrs	9.27	9.17	1.16	6.27
(I) Net mWh Not Generated due to Full Forced Outages	16,753	3,667	446	20,866
(J) Forced Outages: percent of Period Hrs	0.89	0.20	0.02	0.35
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	118,305	116,760	83,415	318,480
(N) Economic Dispatch: percent of Period Hrs	6.31	6.23	3.84	5.38
(O) Net mWh Possible in Period	1,874,640	1,874,640	2,169,550	5,918,830
(P) Equivalent Availability (%)	80.81	82.34	91.01	85.03
(Q) Output Factor (%)	83.23	83.20	94.57	87.42
(R) Heat Rate (BTU/NkWh)	11,466	11,388	0	6,843

Notes:

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**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	225	225	267	717
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,367,833	1,382,730	1,660,714	4,411,277
(D) Capacity Factor (%)	69.40	70.15	71.00	70.23
(E) Net mWh Not Generated due to Full Scheduled Outages	118,275	105,158	161,695	385,128
(F) Scheduled Outages: percent of Period Hrs	6.00	5.34	6.91	6.13
(G) Net mWh Not Generated due to Partial Scheduled Outages	243,850	240,968	46,146	530,963
(H) Scheduled Derates: percent of Period Hrs	12.37	12.23	1.97	8.45
(I) Net mWh Not Generated due to Full Forced Outages	26,299	35,310	3,449	65,057
(J) Forced Outages: percent of Period Hrs	1.33	1.79	0.15	1.04
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	17,309	17,309
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.74	0.28
(M) Net mWh Not Generated due to Economic Dispatch	214,744	206,835	449,608	871,186
(N) Economic Dispatch: percent of Period Hrs	10.90	10.49	19.22	13.87
(O) Net mWh Possible in Period	1,971,000	1,971,000	2,338,920	6,280,920
(P) Equivalent Availability (%)	80.29	80.65	90.23	84.10
(Q) Output Factor (%)	77.17	77.38	76.68	77.05
(R) Heat Rate (BTU/NkWh)	11,385	11,308	0	7,075

Notes:

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**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Mayo Station

Units	Unit 1
(A) MDC (mW)	746
(B) Period Hrs	8,760
(C) Net Generation (mWh)	1,520,440
(D) Net mWh Possible in Period	6,534,960
(E) Equivalent Availability (%)	86.12
(F) Output Factor (%)	48.06
(G) Capacity Factor (%)	23.27

Notes:

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**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
November, 2016 through October, 2017**

Roxboro Station

Units	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	8,760	8,760	8,760
(C) Net Generation (mWh)	1,663,915	2,077,840	1,163,135
(D) Net mWh Possible in Period	5,895,480	6,114,480	6,228,360
(E) Equivalent Availability (%)	94.53	90.08	68.46
(F) Output Factor (%)	63.47	57.06	61.50
(G) Capacity Factor (%)	28.22	33.98	18.67

Notes:

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Duke Energy Progress
Outages for 100 mW or Larger Units
October, 2017

Full Outage Hours

<u>Unit Name</u>	<u>Capacity Rating (mW)</u>	<u>Scheduled</u>	<u>Unscheduled</u>	<u>Total</u>
Brunswick 1	938	0.00	0.00	0.00
Brunswick 2	932	0.00	0.00	0.00
Harris 1	928	0.00	52.32	52.32
Robinson 2	741	0.00	0.00	0.00

Duke Energy Progress
Outages for 100 mW or Larger Units
October 2017

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	0.00	0.00
Asheville Steam 2	192	631.42	0.00	631.42
Asheville CT 3	185	161.00	0.00	161.00
Asheville CT 4	185	114.00	0.00	114.00
Darlington CT 12	133	614.32	0.00	614.32
Darlington CT 13	133	603.73	0.00	603.73
Lee Energy Complex CC 1A	223	162.08	0.00	162.08
Lee Energy Complex CC 1B	222	133.87	0.00	133.87
Lee Energy Complex CC 1C	223	0.00	0.00	0.00
Lee Energy Complex CC ST1	379	0.00	0.00	0.00
Mayo Steam 1	746	309.07	34.15	343.22
Richmond County CC 1	183	744.00	0.00	744.00
Richmond County CC 2	183	72.37	0.00	72.37
Richmond County CC 3	185	744.00	0.00	744.00
Richmond County CC 4	186	72.35	0.00	72.35
Richmond County CC 6	179	120.77	0.00	120.77
Richmond County CC 7	189	0.00	0.00	0.00
Richmond County CC 8	189	0.00	8.78	8.78
Richmond County CC ST4	175	0.00	4.27	4.27
Richmond County CC 9	214	322.75	54.15	376.90
Richmond County CC 10	214	319.33	0.00	319.33
Richmond County CC ST5	248	329.13	0.00	329.13

Notes:

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Duke Energy Progress
Outages for 100 mW or Larger Units
October 2017

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Roxboro Steam 1	380	600.00	0.00	600.00
Roxboro Steam 2	673	431.43	0.00	431.43
Roxboro Steam 3	698	367.62	0.00	367.62
Roxboro Steam 4	711	432.00	0.00	432.00
Sutton Energy Complex CC 1A	225	109.23	0.17	109.40
Sutton Energy Complex CC 1B	225	110.23	142.82	253.05
Sutton Energy Complex CC ST1	267	122.27	0.00	122.27
Wayne County CT 10	192	105.00	0.00	105.00
Wayne County CT 11	192	89.00	0.00	89.00
Wayne County CT 12	193	0.00	0.00	0.00
Wayne County CT 13	185	0.00	0.00	0.00
Wayne County CT 14	197	0.00	0.00	0.00

Notes:

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